

ABSTRACT OF THE DISCLOSURE

A polymer electrolyte fuel cell includes an electrode including a catalyst layer and a diffusion layer. The catalyst layer is divided into a plurality of portions
5 including an upstream portion and a downstream portion along a reactant gas flow direction. The upstream portion of the catalyst layer has a structure for preventing a drying-up of the cell, and the downstream portion of the catalyst layer has a structure for preventing a flooding of the cell. A structure of the diffusion layer also may differ between at the upstream portion and at the downstream portion.